

REMARKS

Claims 1-15 remain pending in the application. The applicant has added claims 16-18.

The applicant has amended the Summary of the Invention to correspond more closely with the amended claims. The applicant has amended the first paragraph on page 10 of the Specification to provide more consistent terminology.

As defined in the amended claim 1, the subject invention comprises a vehicle occupant support apparatus for installation in a vehicle seat. The apparatus comprises an array of air cells including expandable chambers.

What, among other things, distinguishes the invention of claim 1 from the prior art is the inclusion of a control module that has an input connectable to a fluid supply system and enough outputs to connect only a selected portion of the array to the fluid supply system. This allows the array of air cells to be conformed to any one of a plurality of different vehicle types by connecting to the limited number of outputs only those cells that are appropriate or intended for use in a given vehicle type.

The Office Action rejects claims 1-15 under 35 U.S.C. § 102(b) as being anticipated by Katoh et al.

Regarding claim 1 the Office Action indicates that Katoh et al. disclose a vehicle seat arrangement having a plurality of air cells (13, 15, 17, 19, 21, 25) with expandable chambers comprising a fixed array; a controller (37), a fluid supply system, and fittings (valves 33) for cutting off one or more of the air cells to conform *to the fixed array*.

In response, the Applicant maintains that, even if this were true, it wouldn't read on claim 1. Instead, as amended, claim 1 describes a control module having an input connectable to a fluid supply system and including only enough outputs to connect respective cells of a portion of the array to the fluid supply system via the control module. Rather than conforming the air cells "to the fixed array", the claimed apparatus allows the air cell array to be conformed *to any one of a plurality of different vehicle types*. In other words, it provides a way of selecting and connecting only those air cells that are compatible with the type of vehicle they will be used in. Considerations affecting what kind of cells will be selected and connected for use in the seat for a given type of vehicle include the kind of terrain the vehicle is likely to be driven on, the age group of the likely occupants, the luxury class of the vehicle, the type of suspension the vehicle has, and/or the way that vehicle is likely to be driven. For example, if the apparatus is installed in the seat of a sports car, it's likely that certain of the air cells (bolster cells) will be installed longitudinally along either side of the seat cushion and/or the seat back to help restrain the driver against the effect of lateral g-forces experienced during rapid turn rates. If the same apparatus were installed in, for example, a minivan seat, those air cells would likely

remain disconnected from the control module and therefore from the fluid supply system.

Also, the Katoh et al. fittings 33 don't connect air cells to a source of pressurized air *via a control module* as claimed. Still further, the Katoh et al. fittings 33 are valves that the controller opens and closes to modulate air pressure in each of the air cells in a predetermined pattern to continuously expand and contract the air cells. As such, the valves may periodically open and *provide fluid communication* with respective air cells, but they aren't disclosed as being used to *connect* the cells to a fluid supply as claimed.

Katoh et al. neither teach nor suggest that a control module may be incorporated that includes only enough outputs to direct fluid to only a portion of the Katoh et al. air cell array. Neither do Katoh et al. disclose a control module that includes an input for receiving fluid from a fluid supply system and outputs for directing that fluid to multiple air cells. Instead, Katoh et al. disclose an air cell array, all the air cells of which remain in electrical contact with a controller so that the controller can send electrical signals that alternately expand and contract *all* the air cells in a predetermined pattern to reduce fatigue by controlling oscillations transmitted to an occupant through a seat containing the air cells.

For these reasons, the Applicant maintains that claim 1, as amended, is patentable over Katoh et al.

The Applicant has amended claim 1 to more clearly recite that the control module includes only enough fittings or outputs to connect respective air cells of only a portion of the air cell array to a fluid supply through the control module.

Regarding claim 2, the Office Action states that Katoh et al. disclose a fixed array that's part of a modular seating unit including a pump (29), supply hoses (31), and a wiring harness (shown in Figure 2).

As defined in the amended claim 2, the subject invention comprises a vehicle occupant support apparatus for installation of a vehicle seat. The apparatus includes an array of air cells including expandable chambers.

What, among other things, distinguishes the invention of claim 2 from the prior art is the inclusion of a control module for connecting the air cells to a fluid supply system and including a controller, a pump, and a wiring harness connected to the controller. The controller is selected from among a plurality of different function controllers configured to operate the occupant support apparatus according to different respective user preferences.

Katoh et al. neither disclose nor suggest that their modular seating unit includes or might be modified to include a control module that connects air cells to a fluid supply system and that includes a controller, a pump, and a wiring harness connected to the controller. Neither do Katoh et

al. disclose a plurality of different function controllers configured to operate the occupant support apparatus according to different respective user preferences, and from among which a controller is selected to be included in the control module. For this reason, the applicant maintains that Katoh et al. do not anticipate claim 2.

The Office Action doesn't include reasons for rejecting claims 3-15 under 35 U.S.C. § 102(b). Beyond quoting the statutory basis and citing the reference, the office action doesn't designate the particular parts of the reference relied on the support the rejection. As such, the Applicant is unable to discern and respond to the Examiner's reasoning with regard to these claim rejections. The Applicant therefore requests that the Examiner explain each rejection, specifically identify what Katoh et al. disclose that satisfies each and every limitation of these claims, and provide the Applicant an additional opportunity to respond.

The Applicant has added claim 16 to set forth that the control module of the vehicle support apparatus includes a controller and a pump, and that the occupant support apparatus includes hoses connected at one end to respective individual expandable chambers of the fixed array and connectable at respective opposite ends to the control module. These features, in combination with the limitations of the base claim, are neither shown nor suggested in the prior art of record.

The applicant has added claims 17 and 18 to more clearly set forth that the invention includes a method for customizing a fixed air cell

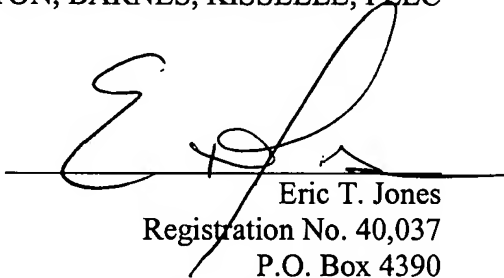
array to suit a particular vehicle seat application. Both claim 17 and claim 18 recite the step of providing a fixed air cell array that includes a plurality of air cells including expandable chambers, and a fluid supply system connectable to the air cells through a controller. What distinguishes claim 17 from the prior art are the steps of selecting from among the air cells those air cells suited to the vehicle application and disconnecting all but the selected air cells from the controller. What distinguishes claim 18 are the steps of selecting from among the air cells those cells suited to the vehicle application and connecting the selected air cells to the controller.

Claims 1-18 recite patentable subject matter and are allowable. Therefore, the applicant respectfully submits that the application is now in condition for allowance and respectfully solicits such allowance. Please favorably reconsider the outstanding office action.

July 21, 2003

I authorize the Assistant Commissioner to charge any deficiencies, or credit any overpayment associated with this communication to Deposit Account No. 50-0852. A duplicate copy of this sheet is enclosed.

Respectfully submitted,
REISING, ETHINGTON, BARNES, KISSELLE, PLLC



Eric T. Jones
Registration No. 40,037
P.O. Box 4390
Troy, Michigan 48099
(248) 689-3500

Date: *July 21, 2003*